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Efek Proteksi Biji Mahoni (Swietenia mahagoni Jacq.) terhadap Kerusakan Hepar Mencit yang Diinduksi Parasetamol

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Abstract

Background: *Seedof Swietenia mahagoni Jacq. contains alkaloids, saponins, flavonoids, triterpenoids, steroids, and tannins which were thought to protect liver from free radicals.In present study, Swietenia mahagony Jacq.seed extract was evaluated for its protective effect on paracetamol-induced liver damage in mice.*

Methods:*To evaluate the hepatoprotective effects of Swietenia mahagony Jacq. seed extract, 28 male Swiss webster micewere equally divided into four groups. Animals of group I (K) and group II (P_1) were given aquadest for 14 days. Group III (P_2) received 14 mg/25 g body weight of mice of Swietenia mahagony Jacq. seed extract and the last group (P_3)received 28 mg/25 g body weight of mice of Swietenia mahagony Jacq. seed extract for 14 days.Paracetamol was given to groups of P_1, P_2, andP_3.Mice were sacrificedon the 15^{th} day and histological preparation was made to evaluate histological damage on liver. Liver histological features were assessed by counting the number of hepatocyte on centrolobuler zone undergoing pyknosis, karyorhexis, and karyolysis. Data were analyzed using the OneWay ANOVA test ($\alpha = 0.05$) and then were continued with Post Hoc Multiple Comparisons (LSD) test ($\alpha = 0.05$).*

Results:*The mean liver histological damage score was significantly higher on group of P_1=60.71+7.521, whilegroup of K= 9.86+1.574 as the less.P_2grouphad fewer numbers of liver histological damage (32.57+2.573) compared to the P_3group(43.57+3.101). The results of OneWay ANOVA and LSD test showed that there was significant difference between the four groups ($p = 0.000$).*

Conclusions:*Swietenia mahagony Jacq.seed extract showed protective effect against the hepatotoxicity induced by paracetamolin mice.Swietenia mahagony Jacq.seedextract with the dose of 14 mg/25 g bodyweight of mice showed a higher hepatoprotective effect than the dose of 28 mg/25 g body weight of mice.*

Keywords:*Swietenia mahagony Jacq. seed, liver damage,paracetamol*

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